

CSIR-NIIST Golden Jubilee Conclave Series

NEW VISTAS IN CRITICAL MINERALS AND MATERIALS

Organized by

Materials Science and Technology Division



सीएसआईआर का अंतर्विषयी आयाम
Interdisciplinary face of CSIR



August 01,
2025



CSIR-NIIST,
Thiruvananthapuram



| Minerals | Metals | Materials |

The CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), located in Thiruvananthapuram, Kerala, is a premier research institution under the Council of Scientific and Industrial Research (CSIR), Government of India. Established in 1975 as the CSIR-Trivandrum Complex, it was renamed as the Regional Research Laboratory in 1978 and later became NIIST in 2007. CSIR-NIIST specializes in a broad spectrum of research areas, including agro-processing and technology, chemical sciences, materials science, microbial processes, environmental technology, sustainable energy technologies and AI & ML. Beyond research, NIIST plays a significant role in human resource development, offering Ph.D. programs through the Academy of Scientific and Innovative Research (AcSIR) and training opportunities for postgraduate and graduate students. To date, the institute has awarded over 250 Ph.D. degrees based on research conducted within its facilities. CSIR-NIIST continues to play a key role in advancing science and technology for national development and industrial innovation.

CSIR-NIIST GOLDEN JUBILEE CONCLAVE SERIES ON CRITICAL MINERALS AND MATERIALS

The Golden Jubilee Conclave on New Vistas in Critical Minerals and Materials serves as a dynamic platform bringing together industry leaders, scientists, and policy makers to address the evolving landscape of critical minerals and advanced materials. Focusing on strategic sectors such as energy, electronics, aerospace, and defense, the conclave highlights emerging trends, breakthrough technologies, and transformative applications. Aligned with national missions and priorities, the event fosters meaningful knowledge exchange, cross-sectoral collaboration, and policy-level dialogue. It aims to drive innovation, promote circular economy practices, and strengthen India's self-reliance and global competitiveness in critical materials science and technology, paving the way for a sustainable and resilient future.

MATERIALS SCIENCE AND TECHNOLOGY DIVISION (MSTD)

The Materials Science and Technology Division (MSTD) at CSIR-NIIST is actively engaged in advanced research across five major areas: (i) Beach sand minerals and critical materials, (ii) Metals, alloys, and composites, (iii) Clays and functional ceramics, (iv) Rare earths, and (v) Polymers, nanocomposites, and coatings. The division is committed to cutting-edge R&D to address technological challenges in energy, aerospace, automotive, and defense sectors. Over the past five decades, MSTD has established itself as a leading division, collaborating with renowned industries such as MRF Ltd., Pidilite India Ltd., ITC-Bangalore, Sri Ram Fibres, Pee Kay Steel, Hindalco, Aditya Birla Insulators, ZF-CVCS, and Momenive. The division also maintains strong ties with strategic government agencies, including ISRO, BARC, DRDL, ADA, and CVRD. In line with national priorities, MSTD is involved in research on critical mineral extraction, recovery, and purification from secondary resources such as e-waste, spent batteries, magnets, and industrial leachates—supporting the emerging e-mobility ecosystem. The division is also part of a major national mission on biodegradable green packaging materials and is developing ceramics for high-temperature and electronic applications. Additionally, MSTD is working on converting various types of industrial waste into value-added building materials, promoting sustainability and circular economy.

PROGRAMME

August 01, 2025 | Bhatnagar Auditorium, CSIR-NIIST

08:30 AM	:	Registration
10:00 AM	:	Inaugural Program <ul style="list-style-type: none">Welcome AddressLighting the LampPresidential AddressChief Guest AddressGuest of Honor AddressExchange of MoUVote of Thanks
11:00 AM	:	Tea Break
11:20 AM	:	Session 1: Keynote Address <i>Critical Minerals and Materials</i>
12:00 PM	:	Invited Talk 1
12:30 PM	:	Invited Talk 2
01:00 PM	:	Lunch Break
02:00 PM	:	Session 2: Panel Discussion <i>"Strategic Roadmap for Critical Minerals and Materials in India: From Exploration to Atmanirbharta"</i>
03:00 PM	:	Session 3: Technical Presentation
04:00 PM	:	Tea Break Poster Presentation
04:30 PM	:	Valedictory Function
05:00 PM	:	Alumni meet & Felicitation of former MSTD members



REGISTRATION

Registration Fee (Inclusive of GST)

Student	:	Rs. 500/-
Scientist/Faculty	:	Rs. 1000/-
Industry Personnel	:	Rs. 2000/-

PAYMENT DETAILS

Name : (NIIST) Regional Research Laboratory
A/C No. : 67047723825
Bank : State Bank of India
Branch : Pappanamcode Industrial Estate
IFSC : SBIN0070030

Call for Abstracts

- Abstracts are invited for technical presentations & posters
- Abstracts should be in word format not more than 300 words

Important Dates

Abstracts submission due:
July 20, 2025

Registration closes on:
July 31, 2025



Prizes for
best oral & poster
presentations

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**CSIR-NIIST – Celebrating 50 Years of
Excellence in Innovation**



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